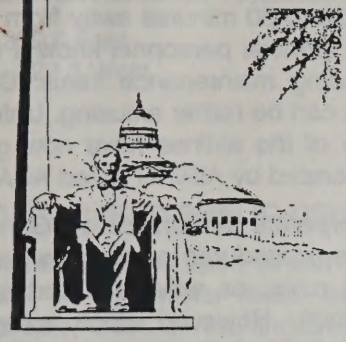

The CAPITOL HILL MONITOR

July 1993

SCANNING THE CIVILIAN AIRCRAFT BAND

by Bill Hardman and Alan Henney

If you're the average scanner enthusiast you probably dedicate most of the channels in your scanner to public safety or perhaps federal or business frequencies while neglecting the civilian aircraft band.

Poor reception of the amplitude-modulated aircraft band and often cryptic hard-to-understand messages have contributed to many scanner listeners getting frustrated while monitoring aircraft communication. You mustn't let difficulties such as these prevent you from enjoying the aircraft band.

With a little experience, you don't have to be a pilot to understand what you're hearing. Let's start by taking a look at the steps a plane and pilot go through to get from point A to point B. The we'll list just a taste of the frequencies used in our area.

We will assume that this imaginary flight is an airliner so that we can illustrate the radio communications that will take place. A general aviation pilot, both corporate and recreational, would follow essentially the same steps.

First the pilot files a flight plan that states what kind of aircraft and from where he will be leaving to where he will be going, and what route he would prefer. A commercial pilot always flies by IFR (instrument flight rules) regardless of the weather. A recreational or corporate pilot may fly by VFR (visual flight rules) as long as he meets a list of requirements such as not flying too high and staying out of controlled airspace (like over Washington).

Shortly before our "Acme Airlines" plane is ready to depart, the crew will make our first radio call - to clearance delivery on the airport (usually). He will identify himself - the first question scanner listeners have about aircraft radio. With airlines, it's easy. The call sign is the airline and flight number. "Acme 221". (A few airlines use cute names, like America West is "Cactus"; it also prevents them from being confused with American Airlines). Non-commercial aviation identifies by the type of aircraft and the registration number - Cessna 46E (each numeral is supposed to be pronounced separately, and letters pronounced phonetically - 4-6-Echo).

Clearance delivery will tell the crew if the flight has been approved - "you are cleared for departure to (destination) at (time)." If, because of weather, or air traffic restrictions, the route has been changed, the crew will also be told. The crew will also be told what runway and departure frequency is in use. Additionally, Acme 221 will be told to "squawk" a four digit number. This is a number that the crew programs into the transponder - it emits a signal that shows up on the controller's radar screen and allows him to identify a particular aircraft.

When our flight is ready to depart, hopefully on time, the crew will contact "ground control" for permission to taxi to the runway. (At some larger airports there is a separate frequency, "ramp control", for taxiing in and around the gates). Contact is maintained with ground control until the plane reaches the runway, when it changes to "tower." The tower, when it is safe, will give Acme 221 permission to take off.

With Acme 221 safely in the air, somewhere at about 1,500 feet, it will be told to switch to departure. Acme 221 normally acknowledges this with "good day" or "going to departure." On the departure frequency, Acme 221 will let controllers know he is there by saying "Departure, Acme 221 with you through 1,500 to 3,000." Actually, this is more of a communications check, because departure is

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normally located at the tower and they know he's there (hopefully). Acme 221 will continue its climb and perhaps be told "come right to 030" which means to begin a right turn to the heading 030. Instructions like this are supposed to be repeated back by the aircraft to ensure understanding.

Acme 221 will also be told to climb to, say, 17,000 feet. That altitude is higher than the airport control area, but has been coordinated by departure control with the "Center." As Acme 221 passes through about 15,500 feet, departure will tell him to switch to center on (and give a frequency). By this time, most of us can only hear the plane and not the ground. Acme 221 will reply by repeating the frequency - however, common usage is not to repeat the whole thing, but only enough to let the controller know the pilot understood the message. Therefore the response often is "to Washington Center, 32.32, good day." In other words, they drop the first and last digits of the frequency, in this case 132.325, because they are understood by all concerned. Also, above 16,500 feet, altitudes are referred to as "flight levels" and only the first three digits are used; thus, 17,000 feet becomes flight level 170 and 23,000 feet becomes flight level 230.

Control of Acme 221 has now passed to one of the 20 Air Route Traffic Control Centers operated by the FAA. Among them, the "centers" cover all the air space over the United States. Each of the centers is divided into two (and sometimes three) levels of sectors - low and high altitude (the third is very high altitude). As Acme 221 passes through these sectors, it will be told to change frequency because each of the sectors has its own controller and frequency. When this occurs, the pilot will be told what frequency to change to as described above. Depending on your location and antenna configuration, you can follow Acme 221 for 200 to 300 miles, although you will not hear the ground station.

Each of the centers is centrally located - Washington Center, responsible for air space roughly from the Atlantic Coast to West Virginia, and from southern New Jersey and Pennsylvania to mid-North Carolina, is actually located at Leesburg. That is where the controllers are physically located watching their radar screens. The transmitter for the sector, however, is remotely located at an appropriate place in the sector, so you don't have to be near Leesburg to hear a sector in your area. For example, one of the remote sites is at Patuxent NAS. If you are close to Patuxent, you will hear both sides of the conversation.

As Acme 221 "nears" its destination, the center will tell them to begin their descent. The procedures they follow will then be the reverse of what they did for take off. One note, when they have safely landed, the tower will often tell them to switch to ground as they exit the runway; and this is again often done in "shorthand." The tower will often only say "switch to ground on point 7." Because almost all ground control frequencies are 121.6-121.9, they simply state the last digit - point seven is 121.7.

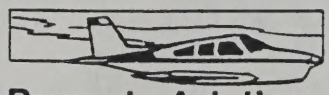
One of the fun things to listen to in commercial aviation is the "company radio." These frequencies are located between 128.825 and 132.0. Each airline (sometimes they are shared) operates a radio base at the airports it serves. When an airliner is 20 to 30 minutes away from landing it will call in to let the terminal personnel know if they have any requests, including maintenance items. Sometimes these conversations can be rather amusing. Unfortunately for hobbyists, many of the airlines have now gone to a telemetry system operated by AIRINC called ACARS.

Recreational and corporate aircraft (called General Aviation) follow the same procedures as above when they fly by instrument flight rules, or exceed a certain altitude (generally 14,500 feet). However, since many of the smaller planes normally don't fly that high, and/or, if the weather is nice, they often go by VFR (Visual Flight Rules). Procedures are the same as described above for Acme 221, except that these smaller aircraft do not switch to "center" from departure. Instead, as they leave the airport control area, they fly on their own - "Visually" and are told to "squawk" 1200, a standard code for VFR flights.

The above is very sketchy and general, but hopefully will help those not familiar with aviation communications. Please don't use this to study for your pilot's license!!

Needless to say, there are hundreds of acronyms and jargon that will become apparent as you become more familiar with this fascinating part of the radio spectrum - NAVAIDS, ARSA, DME, VOR, etc, ad naseum. We'll save those for another time.

One final note. Military aircraft operate on both VHF (AM) and UHF (AM). When operating on VHF, they follow the same general procedures as civilian aircraft. Most often, you will hear small aircraft and transports. Combat aircraft operate almost exclusively on UHF. Procedures are generally the same, except for adjustments for the speed and rate of climb in these high performance jets. Their radio conversaton also tends to be a bit more terse than their civilian counterparts. Most VHF air traffic control frequncies, therefore, have a UHF equivalent, which has been listed also.



Promote Aviation

Here are some frequencies to get you started:

Baltimore Radar Service Area

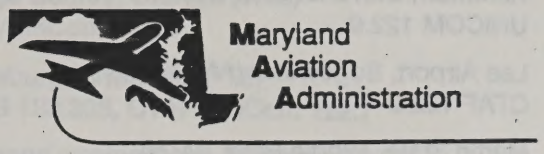
119.0, 228.4 (20 to 100 degrees)
119.7, 231.6 (101 to 199 degrees)
128.7, 307.9 (200 to 19 degrees)

Dulles Radar Service Area

126.1, 384.9 (331 to 90 degrees)
124.65, 390.9 (91 to 240 degrees)
120.45, 390.9 (241 to 330 degrees)

Washington National Terminal Control Area

124.2, 269.0 East
119.85, 322.3 West



RADIO-EQUIPPED PUBLIC-USE AIRPORTS

The FAA designates each airport with a combination of letters, or, for smaller fields, letters and numbers. For example, DCA is Washington National. Because these designations are often used in radio transmissions, they have been listed after the name of the airport. Also, NAVAIDS, unless they are voice, have been eliminated.

An ATIS (Air Terminal Information Service) provides constant information on current weather, runways in use, and special warnings at the airport where it is located.

UNICOM is used, as listed below, for communications with fields where there is no tower (it has other uses as well). When listed where there is a tower, it is used to transmit general information - parking, fuel requirements, etc., usually to the contractor providing general aviation services.

DELAWARE

Chandelle Estates Airport, Dover (0N4)
UniCom 122.8

Delaware Airpark, Cheswold (33N)
UniCom 123.0

DelDOT HeliStop, Dover (0N5)
UniCom 123.0

Henderson Airport, Felton (0N6)
UniCom 123.0

Jenkins Airport, Wyoming (15N)
UniCom 122.8

Laurel Airport (N06)
PCL/UniCom 122.8

New Castle County, New Castle (ILG)
ATIS 123.95, Tower 126.0, UniCom 122.95

Smyrna Airport (38N)
UniCom 122.8

Summit Airpark, Middletown (N92)
Clnc Del 125.3, UniCom 122.7

Sussex County Airport, Georgetown (GED)
Clnc Del 125.55, UniCom 123.0

MARYLAND

Baltimore Airpark, White Marsh (1W2)
CTAF/UniCom 123.0

Baltimore Washington International, Linthicum (BWI)
ATIS 115.1, 127.8; Clnc Del 118.05, Ground 121.9, Tower 119.4, 257.8; Butler Avn/UniCom (FBO) 122.95

Bay Bridge, Stevensville (W29)
CTAF/UniCom 123.0

Bennett Airport, Salisbury (1N5)
CTAF/UniCom 122.8

Cambridge-Dorchester Municipal (CGE)
CTAF/UniCom 122.7

Carroll County, Westminster (W54)
AWOS 121.25, CTAF/UniCom 122.7

Cecil County, Elkton (2N0)
CTAF/UniCom 123.0

Clearview Airpark, Westminster (2W2)
CTAF/UniCom 122.8

College Park (CGS)
UniCom 123.0

Crisfield-Somerset County (W41)
CTAF/UniCom 122.8

Cumberland Municipal (CBE)
AWOS 128.62, CTAF/UniCom 122.8

Davis Airport, Laytonsville (W50)
CTAF/UniCom 122.8

Easton Municipal (ESN)
AWOS 124.475, CTAF/UniCom 122.95 (formerly 122.8)

Essex Skypark (W48)
CTAF/PCL/UniCom 122.7

Fallston (W42)
UNICOM 122.9

Frederick Municipal (FDK)
AWOS 124.875, CTAF/UniCom 123.0

Freeway Airport, Mitchellville (W00)
UniCom 122.7

Garrett County, Accident (2G4)
UniCom 122.8

Harford County, Churchville (0W3)
CTAF/UniCom 122.8

Havre de Grace (3MD9)
UNICOM 123.0

Kentmorr, Stevensville (3W3)
UNICOM 122.9

Lee Airport, Edgewater (ANP)
CTAF 122.9

Martin State, Middle River (MTN)
ATIS/AWOS 124.925, UniCom 122.95,, Tower 121.3, 297.2; Ground 121.8

Maryland Airport, Indian Head (2W5)
CTAF/UniCom 122.7

Mexico Farms, Cumberland (1W3)
UNICOM 122.8,

Montgomery County, Gaithersburg (GAI)
AWOS 128.275, CTAF/PCL/UniCom 122.7, IFR Clnc Del 121.6, Ramp Svc 122.85 (NOTE: Clnc Del is used only for IFR flights)

Ocean City Municipal (N80)
CTAF/UniCom 122.8

Potomac Airpark, Fort Washington (W28)
CTAF/UniCom 122.8

Raintree Airpark, Elkton (58M)
CTAF/UniCom 122.8

Ridgely Airpark (1N0)
CTAF/UniCom 122.8

Saint Mary's County, Hollywood (2W6)
CTAF/UniCom 123.0

Salisbury-Wicomico County Regional (SBY)
CTAF 123.6, UniCom 122.95

Scheeler Field, Chestertown (0W7)
CTAF/UniCom 122.7

Suburban Airport, Laurel (W18)
CTAF/UniCom 122.8

Washington County Regional, Hagerstown (HGR)
AWOS 126.375, Ground 121.9, Tower 120.3, 265.7; UniCom 122.95

Washington Executive/Hyde Field, Clinton (W32)
CTAF/UniCom 122.8

VIRGINIA

Accomack County, Melfa (MFV)
AWOS 118.175, CTAF/UniCom 122.8

Blackstone Army Air Field/Allen C Perkinson Municipal (BKT)
CTAF/UniCom 122.95, Military Tower (when manned) 126.2

Blue Ridge, Spencer (MTV)
AWOS 118.45, CTAF/UniCom 122.7

Bridgewater Air Park (VBW)
CTAF/UniCom 122.7

Brookneal-Campbell County (0V4)
CTAF/UniCom 122.7

Charlottesville-Albermarle County (CHO)
ATIS/AWOS 118.425, CTAF/Tower 124.5, Gnd Ctrl 121.9,, UniCom 122.95

Chase City Municipal (CXE)
UniCom 122.9

Chesapeake Municipal (W36)
CTAF/UniCom 122.7

Chesterfield County, Chesterfield (W98)
AWOS 128.625, CTAF/UniCom 122.8, RIC Clearance 124.6 (NOTE: This is an "off field" clnc del, i.e., it is operated by Richmond for clnc del on other fields nearby)

Crewe Municipal (W81)
CTAF/UniCom 122.8

Culpeper County, Brandy Station (W49)
CTAF/UniCom 123.0

Danville Regional (DAN)
AWOS 128.125, CTAF/UniCom 123.0

Emporia/Greensville Municipal (EMV)
CTAF/UniCom 123.0

Falwell Airport, Lynchburg (W24)
CTAF/UniCom 123.0

Farmville Municipal (FVX)
AWOS 127.725, CTAF/UniCom 122.8

Franklin Municipal (FKN)
AWOS 124.675, CTAF/UniCom 122.8

Front Royal-Warren County (FRR)
CTAF/UniCom 123.0

Gordonsville Municipal (GVE)
CTAF/UniCom 122.8

Grundy Municipal (GDY)
UNICOM/CTAF 122.9

Hampton Roads, Portsmouth (PVG)
AWOS 118.375, CTAF/UniCom 123.0

Hanover County Municipal, Ashland (W83)
CTAF/UniCom 122.7, RIC Approach 119.9, RIC Clearance 125.4

Hartwood (8W8)
CTAF/UniCom 122.8

Hummel Field, Saluda (W75)
CTAF/UniCom 123.0

Ingalls Field, Hot Springs (HSP)
AWOS 118.8, CTAF/UniCom 123.0

Kellam Field, Belle Haven (W08)
CTAF 122.9

Lake Anna Airport, Bumpass (7W4)
CTAF 122.9

Lawrenceville-Brunswick County (LVL)
CTAF/UniCom 122.8

Lee County, Pennington Gap (PTG)
CTAF 122.9

Leesburg Municipal (JYO)
AWOS 125.225, CTAF/UniCom 122.8

Lonesome Pine, Wise (LNP)
AWOS 118.6, CTAF/UniCom 123.0

Louisa County/Freeman Field, Louisa (LKU)
CTAF/UniCom 122.7

Lunenburg County, Kenbridge (W31)
CTAF 122.9

Luray Caverns, Luray (W45)
CTAF/UniCom 122.8

Lynchburg Regional (LYH)
ATIS/AWOS 119.8, CTAF/Tower 127.65, Gnd Ctrl 121.9, UniCom 122.95

Manassas Municipal (HEF)
AWOS 127.525, Clnc Del 118.15, UniCom 123.0, Gnd Ctrl 121.8, Tower 133.1, 360.75

Marks Municipal, Clarksville (W63)
CTAF 122.9

Mecklenburg-Brunswick Regional, South Hill (5W2)
AWOS 127.525, CTAF/UniCom 122.8

Mountain Empire Rural Retreat (MKJ)
AWOS 123.875, CTAF/UniCom 122.7

New Kent, Quinton (W96)
CTAF 122.8

New London, Forest (W90)
UniCom 122.8

New Market (8W2)
CTAF/PCL/UniCom 122.8

Newport News-Williamsburg International (PHF)
(Patrick Henry Field)
ATIS 128.65, Clnc Del/Gnd Ctrl 121.9, Tower 118.7, UniCom 122.95

New River Valley, Dublin (PSK)
AWOS 127.375, Cllnc Dell 121.7, UniCom 122.7

Norfolk International (ORF)
App Ctrl 118.9, ATIS 127.15, Clnc Del 118.5, Dep Ctrl 125.2, Gnd Ctrl 121.9, Tower 120.8, UniCom 122.95

Orange County, Orange (W93)
CTAF/UniCom 122.8

Petersburg-Dinwiddie (PTB)
AWOS 133.325, CTAF/UniCom 122.7

Richmond International, Sandston (RIC)
App/Dep Ctrl 126.8 (S), 126.4 (E), 119.9 (NW); ATIS 119.15, Clnc Del 127.55, Gnd Ctrl 121.9, Tower 121.1, UniCom 122.95

Roanoke Regional (ROA)
App/Dep Ctrl 119.05 (360 to 150 deg), 126.9 (151 to 359 deg); ATIS 118.65, Clnc Del 119.7, Gnd Ctrl 121.9, Tower 118.3, UniCom 122.95

Shannon, Fredericksburg (EZF)
AWOS 128.125, CTAF/UniCom 122.8

Shenandoah Valley Regional, Staunton (SHD)
AWOS 124.925, UniCom 123.0

Smith Mountain Lake, Moneta (W91)
CTAF/UniCom 122.8

Suffolk Municipal (SFQ)
CTAF/UniCom 122.7

Tangier Island (TGI)
CTAF/UniCom 122.8

Tappahannock Municipal (W79)
CTAF/UniCom 122.8

Tazewell County, Richlands (6V3)
CTAF 123.05

Twin County Airport, Hillsville (HLX)
AWOS 118.375, CTAF/UniCom 122.8

Virginia Highlands, Abingdon (VJI)
AWOS 127.725, Tri-City App/Dep Ctrl 128.675, UniCom 122.8

Virginia Tech, Blacksburg (BCB)
AWOS 133.325, CTAF/UniCom 123.05, Roanoke Clnc 124.85, 126.9;, Washington Ctr (Appr/Dep) 127.925

Wakefield Municipal (AKQ)
CTAF/UniCom 122.8

Warrenton-Fauquier, Midland (W66)
CTAF/UniCom 122.7

Washington Dulles International, Chantilly (IAD)
App Ctrl 120.45, 126.1; ATIS 134.85, Clnc Del 127.35, Dep Ctrl 126.65, Grd Ctrl 121.9,Tower 120.1, 388.0; UniCom 122.95

Washington National (DCA)
App Ctrl 118.3 (E), 124.7 (W); ATIS 132.65, Clnc Del 128.25, Dep Ctrl 118.95 (below 9,500 ft west), 126.55 (below 9,500 ft east); Gnd Ctrl 121.7, Tower 119.1, 257.6 (120.75 helicopters); UniCom 122.95

Waynesboro/Eagles Nest (W13)
CTAF/UniCom 122.8

West Point Municipal (W97)
CTAF/UniCom 122.8

Whitman Strip, Catlett (0V5)
CTAF 122.9

William M Tuck, South Boston (W78)
CTAF/UniCom 122.8

Williamsburg-Jamestown (JGG)
CTAF/UniCom 122.8

Winchester Regional (W16)
AWOS 124.85, CTAF/UniCom 122.7, RTR 126.15

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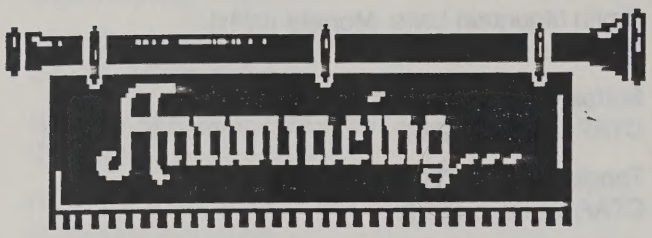
- **BITS AND PIECES AND STUFF**



Fairfax County Fire Completes Changes

Fire Marshal Sean McClanahan says Fairfax County Fire & Rescue has stopped simulcasting channels 1 and 5. Now that Channel 1, 460.575, has finally achieved sufficient countywide coverage, it will remain the dispatch frequency. Channel 5, 460.525, will now be used as an alternate.

Ocean City Beach Patrol Gets Two Additional Channels

When Ocean City installed its GE trunked radio system a few months ago, public works personnel were among the first to switch to the new system. As a result, the public works repeater, 154.04, is now used almost exclusively by the beach patrol supervisors who designate the repeater as Channel 4. Little reference is made to beach patrol Channel 3 which is probably the simplex sanitation frequency, 154.025, or talk-around for the 155.37 or 154.04 repeater. As a reminder, Channel 1 is the 155.37 repeater and Channel 2 is 155.22 simplex (all 146.2 Hz).

Vice President Gore and Family Visit Rehoboth Beach

by Alan Henney

The Thursday before Memorial Day Weekend the first of at least 30 Secret Service agents arrived in Rehoboth to secure an ocean-front home in North Shores for Mr. Gore and his family. On Friday agents installed transmitters on their primary channel (Tango, 164.65), secondary channel (Charlie, 165.375) and on the paging frequency (Whiskey, 167.025) on top of the Henlopen Hotel, and at the Sussex County Airport in Georgetown, where VP Gore landed Saturday morning.

Dial-up telephone lines connected the command post, located in a rented mobile home next to the ocean-front residence, to the transmitter sites. Before Gore's arrival most conversations were in the clear. After his arrival, nearly all messages were encrypted.

Not a single message was in the clear when Gore visited a local French restaurant Sunday night where he ate $21 of swordfish. Throughout the weekend numerous agents mingled (or tried to) in crowds while the Gore family enjoyed the beach and boardwalk. The agents we noticed were easy to spot, mainly because of their $2,500 Motorola Saber radios. (Alan - what about the ones you didn't spot? - Bill) The ocean-front house Gore stayed in allegedly belonged to a friend. The Gore family, whose friends frequent the Rehoboth area, is expected to return in the near future for more sun and fun.

Great Scanner Frequency Database Software Gets Even Better!

Robert Cheek has recently released Version 2.02 of his popular RAC Catalog Scanner Frequency Database program (a computer database program adopted by RCMA as the standard for frequency databases). The RAC Catalog provides a convenient method for cataloging, retrieving and printing frequencies for shortwave or scanner enthusiasts who use a computer for record keeping. Bob says the program, which is completely menu driven, is designed to be extremely easy to use.

Within a database entries can be displayed, searched and printed by frequency, user/license, location, service code or scanner channel. Version 2.0 introduces several useful features, such as enhanced help screens, an integrated database of RCMA and FCC service codes, unlimited report formats, a feature which eliminates duplicate records, a merge feature and even a file conversion utility which will import ASCII text or Grove databases directly into the RAC Catalog.

The software requires an IBM PC or compatible with 640K RAM and DOS 2.1 or above. The RAC Catalog, which is

no longer available as shareware, sells for $44.95 from RAC Publications. For additional details contact RAC Publications, 22320 SW 63rd Avenue, Boca Raton, Florida 33428, 407-451-2137.

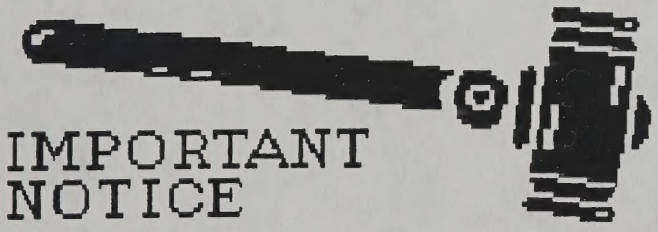
Views and comments are those of the author and do not necessarily reflect those of CHM or represent an advertisement.

Tragedy on the Potomac

By John Korman

As some of us know, during the week of June 7 several upper Montgomery County children went swimming in a NO swimming zone in the Potomac River between Tenfoot Island and Sharpskin Island. Those of us who were listening to the scanner that evening heard Montgomery County Fire & Rescue responded to the scene. After dispatching the incident on Channel 2, 154.16, Montgomery switched units to Channel 10, the fireground/river-rescue frequency, 153.95.

It was neat to hear what the rescue people said to each other. The next day in the mid-afternoon, a fireman who returned to search the scene, came up on Channel 10 and said, "We found the body! We Found the body! Two to three miles down river...." It was a relief to hear for the first time somebody say, we found the child's body. Unfortunately, however, the child was dead on arrival.



NEXT MEETING DATE

We have tentatively booked a room for the next CHM meeting at the District's Takoma library for Saturday, October 16. We hope to have a couple guest speakers on hand. Library staff assure us plenty of parking is available on the street during weekends.

So far four members have expressed interest in serving on a CHM board to create club bylaws. If you're interested in serving, please contact Alan to be notified of related activities.

* * *

Please address all correspondence to Alan. We encourage readers to submit material and to write articles which relate to the hobby. Additionally, we welcome frequency and visitor requests, but kindly include a SASE.

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Newsletter Staff:

Alan Henney, General Editor and Acting Treasurer
Bill Hardman, Contributing Editor/Layout
Mike Peyton and Dave Clark, Distribution
Brent Baker, NewsScan Editor
Ken Fowler, Amateur Radio Net Coordinator

The Capitol Hill Monitor is the non-profit monthly newsletter of the Capitol Hill Monitors. The newsletter keeps scanner enthusiasts abreast of local meetings, frequency profiles and other topics of interest. Dues (which includes 12 issues) are $8. Kindly make checks payable to Alan Henney.

Meeting Coordinators:

Mike Peyton, Maryland Coordinator (703-902-6241)

Ken Fowler, Virginia Coordinator (703-385-2165)

Capitol Hill Monitor's Scanner/Shortwave Net:

Listen for the CHM net, hosted by Ken Fowler, at 7:30 p.m. on the first and third Monday of each month on 146.91 MHz.

Frequency Forum Computer Bulletin Board:

We encourage computer users to log onto Jack Anderson's Frequency Forum computer BBS at 703-207-9622 (8-N-1). Frequency Forum is the official electronic gathering place for readers of the Capitol Hill Monitor!

NOTE:

The editors solicit your comments and contributions of articles, stories, or information. This is your newsletter!

# # #

CHM
6912 Prince George's Ave
Takoma Park, MD 20912-5414

9 Issues Remaining

[redacted]